

# MISSOURI CONSERVATIONIST

VOLUME 86, ISSUE 4, APRIL 2025  
SERVING NATURE & YOU



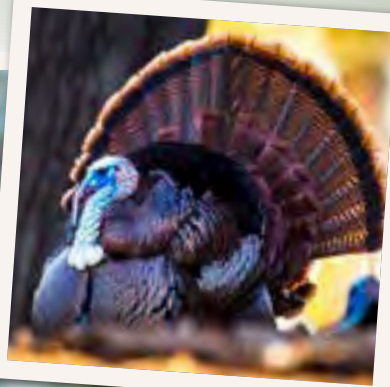




Serving nature and you

# DISCOVER NATURE

Turkeys are an important wildlife resource in Missouri and are found mostly in mixed forests and grasslands statewide. Missouri turkey hunters can pursue turkeys in the spring and fall. To learn more about turkey hunting in Missouri visit [mdc.mo.gov/turkey](http://mdc.mo.gov/turkey).



## wild turkey muffuletta sandwiches

Serves 4

### Relish

- ¾ cup chopped red onion
- ½ cup chopped sweet red pepper
- 1 stalk celery, chopped
- ½ cup kalamata olives, pitted
- ½ cup drained small Spanish pimiento-stuffed green olives
- ¼ cup extra-virgin olive oil
- 2 tablespoons drained capers
- 2 tablespoons chopped parsley
- 12 fresh basil leaves, roughly sliced
- 1 teaspoon chopped fresh oregano
- 1 teaspoon chopped fresh chives
- 1 tablespoon red wine vinegar
- Freshly ground black pepper

### Sandwich

- 1 24-inch-long French or sourdough baguette, split lengthwise
- 12 ounces cooked wild turkey breast, sliced
- 4 ounces Jarlsberg or good Swiss cheese, sliced
- Tomato slices (optional)

**Combine** relish ingredients in food processor and chop finely. Add pepper to taste. Transfer to bowl. Let stand 1 hour at room temperature.

**Spread** half of muffuletta relish over each cut side of bread. Place turkey and cheese on bottom half of bread. Top with tomato slices. Cover with top half of bread. Cut diagonally into 4 sandwiches.

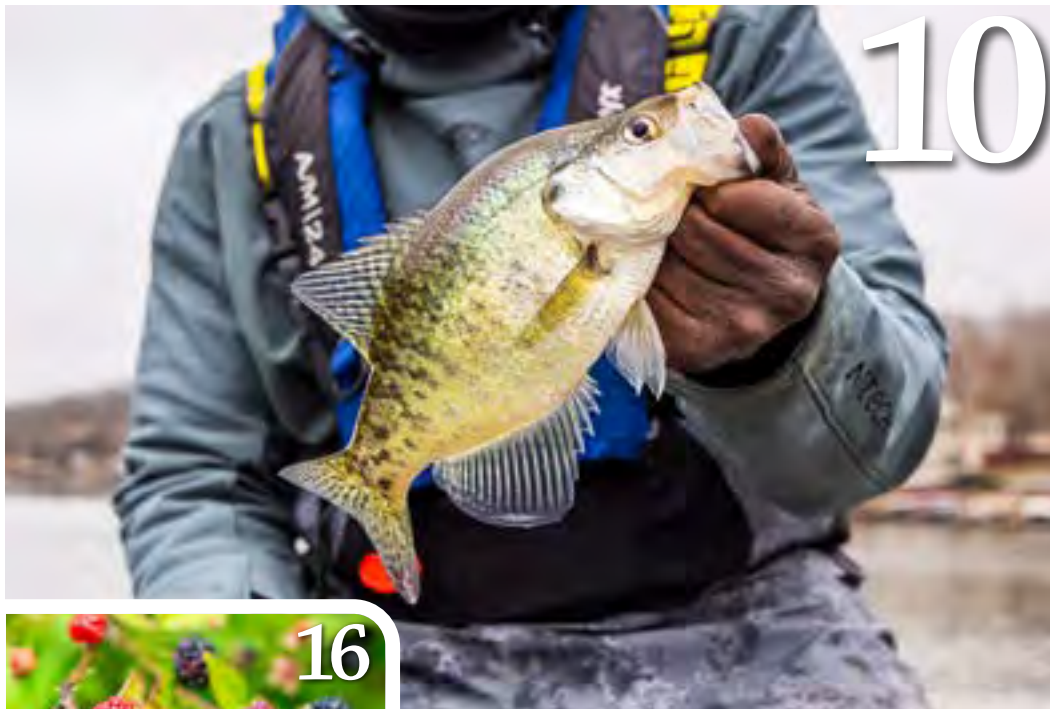
Find more wild recipes in *Cooking Wild in Missouri*. Order yours at [mdcnatureshop.com](http://mdcnatureshop.com).





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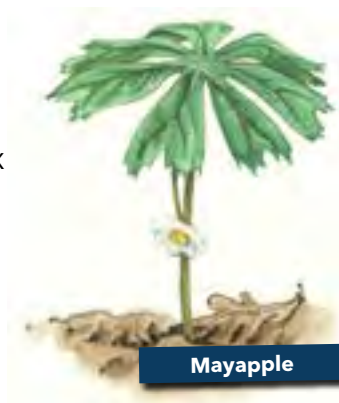
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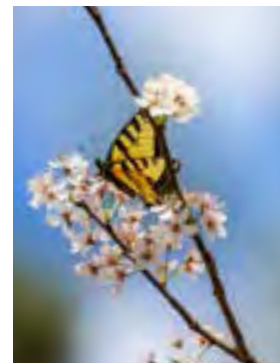
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## MISSOURI CONSERVATIONIST



### ON THE COVER

Eastern tiger swallowtail  
on wild plum blossoms

**NAPPADOL PAOTHONG**

100–400mm lens, f/5.6  
1/3200 sec, ISO 800

**GOVERNOR**  
Mike Kehoe

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# Inbox



## Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email [Magazine@mdc.mo.gov](mailto:Magazine@mdc.mo.gov) or write to us:

MISSOURI  
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JEFFERSON CITY, MO 65102

## FEELING LIGHTER

Life was feeling heavy this morning until savoring the article *Violets of Missouri* [March, Page 16]. Well written, beautifully photographed, and full of reasons to love all our relations.

Brian Page  
via email

## TO KEEP OR RELEASE?

I really enjoyed *To Keep or Release?* [February, Page 10]. Several years ago, we discovered you can reduce the chance of fish swallowing live bait by placing the bait on a jig head hook. For some reason, 99 percent of the time they will not swallow the hook, which reduces injury to the fish. We use this method with earthworms, but it should also be effective while using other live baits.

Danny Marshall Steelville

I really enjoyed and appreciated Andrew Branson's *To Keep or Release?* As an avid tournament bass fisherman, this article brought many good facts, information, and fish care habits that we, as tournament anglers, need to incorporate into our tournament fishing to take better care of the fish.

Steve Ruff via email

## THE SOGGY SIDE

I am a long-time reader of your magazine. *The Soggy Side* by Matt Seek absolutely blew me out of the water [February, Page 20]. His article was easy to read, and I felt like he was sitting in the room telling me this wetland story.

Barbara Doshi via email

## THREE TOES?

I have had the privilege of receiving the *Missouri Conservationist* since I moved away from my childhood home and started college. I am now 67. I have enjoyed every issue, shared used copies at my dentist's and doctors' offices, or pulled out pages and put them in interested neighbors' mailboxes. I have ordered your magazine for nieces and nephews and currently have the kids' edition going to great-nieces and great-nephews. And I couldn't get through the year without your *Natural Events Calendar*, which you keep so affordable, yet top class, and filled with information.

With that said, I have one question — why would you post a front cover showing a splendid picture of a turtle that is called "three-toed," when the picture distinctly shows five toes?

Anne Gleeson via email

*Editors' note: We get this question a lot. The "three toes" in the common name of the three-toed box turtle is in reference to its hind feet, not its front feet, which were pictured prominently on the cover of the March issue. —THE EDITORS*



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## Have a Question for a Commissioner?

Send a note using our online contact form at [mdc.mo.gov/commissioners](http://mdc.mo.gov/commissioners).

## MISSOURI CONSERVATION COMMISSIONERS



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The Missouri Department of Conservation protects and manages the fish, forest, and wildlife of the state. We facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources.





### Want to see your photos in the *Missouri Conservationist*?

Submit your photos online via  
flickr.com/groups/mdcreaderphotos-2025,  
mdc.mo.gov/magazine-reader-photos  
or by emailing readerphoto@mdc.mo.gov



1

1 | American  
lady butterfly by  
**Alex R.**, via Flickr

2 | Baltimore  
oriole at  
Smithville Lake  
by **Tammy  
Harmon**, via  
email

2



3 | Armadillo by  
**Steven Haddix**,  
via Flickr

3



### Want another chance to see your photos in the magazine?

➔ In the December issue, we plan to feature even more great reader photos. Use the submission methods above to send us your best year-round pictures of native Missouri wildlife, flora, natural scenery, and friends and family engaged in outdoor activities. Please include where the photo was taken and what it depicts.



# Up Front

✳ The singing of spring peepers and blooming of redbuds encourage us to venture outdoors. Among hunters and anglers, not sharing a “honey hole” or “secret spot” is a strongly held social norm. This month’s fishing story (see Page 10, *Ate Up by Crappie Fishing*) feels a bit like violating that practice. There’s no secret about the Lake of the Ozarks and crappie, but I hope this story can start a conversation about shifting the social norm. As hunters and anglers, we owe it to future generations to share these secret places so that others can use and enjoy them.

This issue also highlights the work of Ellie Prentice and our social science team (see Page 4, *Nature Lab at Work*). They develop how we reach out to you to better understand the expectations and opinions of Missourians. This is top of mind as we seek input on resident and non-resident hunting issues, waterfowl season framework, and the continuing challenges of deer management.

Our decision-making process relies on public feedback, so it concerns me to hear some say that giving feedback is a waste of time because MDC “will do whatever they want anyway.” We have not always got it right when it comes to management actions, and sometimes tough decisions don’t always align with public opinion, but it is extremely important that we engage and understand public sentiment. To this end, we will continue to leverage the expertise of MDC’s social science professionals to gauge your thoughts and maintain your trust.

**JASON SUMNERS**, DIRECTOR

JASON.SUMNERS@MDC.MO.GOV

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# Nature LAB<sup>at</sup> WORK

by Angie Daly Morfeld

The Missouri Department of Conservation team is diverse and dedicated to conserving, protecting, and improving our fish, forest, and wildlife resources.

## Ellie Prentice TERRESTRIAL HABITAT AND SOCIAL SCIENCE UNIT SUPERVISOR

✳ **Ellie is an environmental and natural resource sociologist.** She supervises a team of scientists who conduct research to inform management of wetland, grassland, and forest systems, and the integration of social science in decision making.

### A TYPICAL DAY

A typical day includes meetings to develop research proposals, coordinating projects with internal and external partners, and planning public input opportunities for department initiatives. Ellie works with teams to think through the human dimensions of conservation challenges and makes recommendations for how to use social science methods and best practices to answer questions and engage the public.

### NOTABLE PROJECTS

“Right now, we are working with the community conservation teams in Kansas City and St. Louis to

Above: Ellie Prentice speaks with grassland conservation partners about community conservation at Boone County Electric Coop in Columbia.

develop an approach for evaluating the incredible work they are doing to make and/or keep conservation relevant to all Missourians,” Ellie said.

This project includes listening to staff and the public, digging through the literature and our existing data, and developing new research projects that can help tell this story.

“I believe that a relationship with nature is what makes us human, and I get to work with brilliant people to ask questions about what that relationship means, how it can best be nurtured, and how we can ensure that the conservation story is one that includes everyone. What a privilege!”

### SUPPORTING THE DEPARTMENT'S MISSION

Ellie would one day like to put an end to the question — what does social science have to do with conservation?

“At the end of the day, conservation is a people game,” Ellie said. “Our efforts succeed or fail largely due to social forces. Social science gives us the tools to better understand these forces and develop communications, programs, and services to meet people where they are.”

### HOW YOU CAN HELP

Speak up! Whether through surveys, focus groups, comment opportunities, or public meetings, know that when you share your perspective, it is highly valued and contributes to shaping an inclusive, sustainable future for conservation in Missouri.

“At the end of the day,  
conservation is a people game.  
Our efforts succeed or fail  
largely due to social forces.”

### Her Education

- Bachelor's degree, Benedictine College: sociology
- Master's degree, University of Central Missouri: sociology
- Doctorate, University of Missouri: rural sociology



# In Brief



Young men  
plant a tree in  
Joplin, MO.

## CELEBRATE MISSOURI TREES

COMMEMORATE ARBOR DAY  
BY PLANTING NATIVE TREES,  
PRACTICING PROPER TREE CARE

➔ Missouri Arbor Day is Friday, April 4. Missouri has been observing the state's official Arbor Day on the first Friday in April since 1886 when the General Assembly declared that day be set aside for the appreciation and planting of trees. National Arbor Day is recognized on the last Friday of April, which is April 25.

Get information on backyard tree care — including types of trees for urban and other landscapes, selecting the right tree for the right place, planting tips, watering and pruning info, and more — at [short.mdc.mo.gov/Z3J](https://short.mdc.mo.gov/Z3J).

MDC's George O. White State Forest Nursery near Licking offers residents a variety of low-cost native tree and shrub seedlings for reforestation, windbreaks, erosion control, and wildlife food and cover. Orders are accepted through April 15. For more information, visit [short.mdc.mo.gov/ZNZ](https://short.mdc.mo.gov/ZNZ).

Communities around the state also hold local Arbor Day activities. For more information on Arbor Day and Missouri's Tree City USA communities, visit the Arbor Day Foundation at [arborday.org](https://arborday.org).

Missouri forests cover about one-third of the state and provide outdoor recreation, wildlife habitat, natural beauty, and watersheds for stream and rivers. Spending time in Missouri forests can provide a natural health benefit, too. Exposure to nature contributes to your physical well-being, reducing your blood pressure and heart rate, relieving stress, and boosting your energy level. Get more information at [short.mdc.mo.gov/4oT](https://short.mdc.mo.gov/4oT).



## CELEBRATE THE OUTDOORS IN APRIL

Spring in Missouri is magical. Days get longer and warmer. Woods come alive with budding trees and shrubs. Dainty wildflowers spring from the earth. Peepers are peeping, turkeys are scratching, coyotes are calling, owls are hooting, and birds are singing. This is the time of year to get outside and discover nature through hunting, fishing, biking, hiking, birding, camping, kayaking, canoeing, and other outdoor adventures.

Let the MDC website guide you on your outdoor excursions. Visit Find Things to Do at [short.mdc.mo.gov/45Z](https://short.mdc.mo.gov/45Z). Visit Places to Go at [short.mdc.mo.gov/Z9o](https://short.mdc.mo.gov/Z9o).

## NEW MDC BOOKLETS AVAILABLE

Missouri hunters, trappers, anglers, and others can get free copies of our updated booklets on spring turkey hunting, hunting and trapping, and fishing at MDC regional offices, MDC nature centers, and other places where permits are sold. The handy booklets have information on related permits, seasons, species, regulations, limits, conservation areas, sunrise and sunset tables, and more. The *Wildlife Code of Missouri* is available at MDC offices across the state.

Get booklet information online at [mdc.mo.gov](https://mdc.mo.gov) using the search tool at the top of the homepage, or use these specific links:

- 2025 Spring Turkey Hunting Regulations and Information at [short.mdc.mo.gov/44t](https://short.mdc.mo.gov/44t)
- A Summary of Missouri Hunting and Trapping Regulations at [short.mdc.mo.gov/44v](https://short.mdc.mo.gov/44v)
- A Summary of Missouri Fishing Regulations at [short.mdc.mo.gov/4gy](https://short.mdc.mo.gov/4gy)
- Wildlife Code of Missouri at [short.mdc.mo.gov/Z8T](https://short.mdc.mo.gov/Z8T)

# Ask MDC

## Got a Question for Ask MDC?

Send it to [AskMDC@mdc.mo.gov](mailto:AskMDC@mdc.mo.gov)  
or call 573-522-4115, ext. 3848.

**Q: I found this as I was mushroom hunting last spring. Could you please help me identify it?**

➔ This is a dwarf larkspur (*Delphinium tricornis*). Missouri has other larkspurs, but this one is the earliest bloomer. Look for these to bloom between April and June. These flowers prefer open wooded slopes, ledges, streamsides, and sheltering bluffs. They start flowering at 6 to 10 inches but can reach 18 inches tall. The petals are shades of blue, violet, white, or a mixture of the three. Bumblebees frequent *Delphinium*, drilling a hole into the spur to collect nectar; bees pollinate the flowers. For more information, visit [short.mdc.mo.gov/4Vz](https://short.mdc.mo.gov/4Vz).



Dwarf larkspur



Springtime darter

**Q: Can you identify this dragonfly?**

➔ This is a springtime darter (*Basiaeschna janata*). These speedy flyers are a harbinger of spring at our creeks and small rivers.

This species of darter prefers rivers and streams with a gentle current, but they'll also stay near forested lakes without much shore vegetation, according to *Dragonflies through Binoculars*, a book by Sidney W. Dunkle. They like to feed in fields, over water, and in open woods. They often

perch near the ground on grass or sticks, but they also hang in trees. Males patrol over the water, flying fast and erratically along the shore or shifting from bank to bank. They mostly patrol at midday, but in the shade and until nightfall. While on patrol, they drive away rival males and attempt to mate with females.

Learn more about Missouri's dragonflies at [short.mdc.mo.gov/4db](https://short.mdc.mo.gov/4db).

DWARF LARKSPUR BY BRENDA PIGGS; SPRINGTIME DARTER BY CAROLYN CLAY; BALD EAGLE BY DIANNE HOCKETT



### Q: What happened to this eagle's beak?

➔ This bird may have suffered a traumatic injury to the skull and face, according to Dana Franzen-Klein, medical director of The Raptor Center at the University of Minnesota College of Veterinary Medicine.

She noted the anatomy of the upper beak — maxillary bone and overlying keratin — as well as the skull surrounding the right eye did not appear normal.

"It could have been an impact-type trauma," she said. "Or perhaps when it was young in the nest, it suffered a constriction injury — something wrapped around the face — that made the beak grow abnormally."

Photos of wild birds with injuries and beak deformities are submitted to scientists occasionally. Some appear to be surviving in the wild, or they are at least fit enough that they cannot be caught.

"It is so hard to say what some of these wild birds go through. I wish they could tell us their stories," she added.



Bald eagle



### Corporal Adam Doerhoff

BOONE COUNTY  
CONSERVATION AGENT  
*offers this month's*

## AGENT ADVICE

Spring is a great time to discover nature, and Missouri is home to over 110,000 miles of rivers and streams. Some are very long and wide while others are small and only have intermittent flow. They're classified as "public" or "private" and "navigable" or "non-navigable," which helps determine how they can be legally accessed. Public, navigable waterways are large rivers on which commercial boats, such as barges, can navigate. Public, non-navigable waterways are mid-sized streams capable of floating smaller vessels, such as kayaks. Private, non-navigable waterways are small streams not capable of floating such vessels and are only accessible with landowner permission. For more information, visit [short.mdc.mo.gov/4Zp](http://short.mdc.mo.gov/4Zp) and click on *Trespassing*.

## What IS it?

Can you  
guess this  
month's  
natural  
wonder?

*The answer is on  
Page 9.*





## REDBUD JELLY

BY A.J. HENDERSHOTT AND SARA BRADSHAW

Spring has its rites of passage. We turkey hunt, search for morel mushrooms, and take long walks to enjoy the flowers and the fresh air after a spring rain. With all the reasons to be outside in nature, you might want to find room for one more — collecting blooms to make redbud jelly.

Redbud trees produce showy magenta flowers each April. Though most of us appreciate the beauty of these trees, not many people see the blooms as a wild edible. They are quite safe to eat — pick a few and taste them fresh from the tree. They have a unique flavor, like a fresh pea with a slightly acidic after taste. They also make a unique jelly with a look and taste all its own.

When collecting blooms for jelly, try not to strip any tree bare. Take a third of the blooms at the most. For this recipe, you will only need 1½ quarts of redbud flowers. You may refrigerate your blossoms for a night or two if needed.

*Makes 9-10 jars of jelly*

### INGREDIENTS:

- 4 cups redbud tea
- 8 cups cane sugar
- 2 packets Sure-Jell (1.75 ounces each)
- 8 tablespoons lemon juice
- 1 teaspoon butter (limits large foam build up when boiling)

**GATHER** 4 cups redbud blooms. Rinse and place in a large bowl or jar. Cover with 4 cups of boiling water. Allow to cool in the refrigerator for 24 hours.

**FILTER** through a jelly bag. Bring the redbud tea to a rolling boil.

**ADD** Sure-Jell. Return to a rolling boil and continue stirring for 60 seconds.

**ADD** sugar, lemon juice, and butter. Return to a rolling boil that can't be knocked down by stirring and continue that boil level for another 60 seconds. Remove from heat.

**POUR** the mixture into pint or half-pint jars to within a half inch from the top. Wipe the rim of the jar clean and screw on the lid.



**FOR REFRIGERATED JELLY:** Allow the jars to cool and refrigerate. The jelly will last several weeks.

**FOR STORED JELLY:** For longer storage outside the refrigerator, prepare a hot water bath. Place a wire rack in the bottom of a canner or large pot. Fill the pot half-way with water and place on a burner set at medium to high. Once your jars have been filled and capped, transfer them to the pot. Add enough water to ensure the jars are covered by 1 to 2 inches of water. Continue heating to a boil. Cover the pot with a tight-fitting lid and boil the jars for 10 minutes then turn the heat off. Remove the lid and allow the pot to cool for 5 minutes. Remove the jars from the hot water bath and place on clean towel to cool. After 12 to 24 hours, check each jar for seal by pressing down on the center of the lid. If the lid doesn't flex, the jar is sealed. If it does flex, simply move that jar to the fridge and use within 3 to 4 weeks.



## BE BEAR WISE

Missouri is home to an estimated 1,000-plus black bears with most being in the southern part of the state. As spring gets underway, these magnificent mammals leave their winter dens in search of food. MDC reminds Missourians to "Be Bear Wise."

MDC Furbearer Biologist Nate Bowersock said it is imperative that residents remove bear attractants from their property, such as bird feeders, trash, barbecue grills, pet food, and food waste.

"As black bears become active in the spring, they are on a mission to find food," said Bowersock. "Keeping areas free of attractants and letting bears find natural foods is in everyone's best interest. If you see a bear, let the animal be and enjoy the sighting, but be sure to not offer it any food."

He noted that intentionally feeding bears can be dangerous as it makes the bears comfortable around people. It can also lead bears to cause significant damage to property while searching for a meal.

"When bears lose their fear of humans, they could approach people in search of food or may defend the food sources or territory they associate with people, which can make them dangerous," Bowersock said. "When this happens, the bear cannot be relocated and has to be destroyed. A fed bear is a dead bear."



Food is usually a bear's main motivator, but that also means it can be a main source of conflict. MDC offers the following tips to avoid attracting black bears to possible food sources:

- Store garbage, recyclables, and compost inside a secure building or in a bear-proof container until trash pick-up day.
- Keep grills and smokers clean and store them inside.
- Don't leave pet food outside. Feed pets a portion at each meal and remove the empty containers.
- Refrain from using bird feeders in bear country from April through November. If in use, hang them at least 10 feet high and 4 feet away from any structure. Keep in mind that even if a bear cannot get to the birdseed, the scent could still attract it to the area.
- Use electric fencing to keep bears away from beehives, chicken coops, vegetable gardens, orchards, and other potential food sources.
- Keep campsites clean and store all food, toiletries, and trash in a secure vehicle or strung high between two trees. Do not keep food or toiletries in a tent, and do not burn or bury garbage or food waste.

While black bears are generally a shy, nonaggressive species and bear attacks are rare, follow these tips when outdoors in bear country:

- Make noise, such as clapping, singing or talking loudly, while hiking to prevent surprising a bear.
- Travel in a group if possible.
- Keep dogs leashed.
- Be aware of the surroundings. If there is evidence of a bear, such as tracks or scat, avoid the area.
- Leave bears alone! Do not approach them, and make sure they have an escape route.

Report bear sightings and post photos online at [short.mdc.mo.gov/4gF](https://short.mdc.mo.gov/4gF).

For more information on how to Be Bear Wise, visit [bearwise.org](https://bearwise.org) and [mdc.mo.gov/bearaware](https://mdc.mo.gov/bearaware).



## WHAT IS IT? BIG RED FALSE MOREL

The big red false morel is a reddish brown mushroom with a convoluted, brainlike cap and a whitish stalk. Like the true morel mushroom, it grows from March through May. Unlike the true morel, which is hollow inside, a false morel is not. Rather, its buffy-tan insides are chambered. MDC does not recommend that you eat false morels. For more information about Missouri mushrooms, including which ones are edible, visit [short.mdc.mo.gov/4V3](https://short.mdc.mo.gov/4V3).



# *Ate Up by Crappie Fishing*

ANGLER FINDS LAKE OF THE OZARKS  
IDEAL IN PURSUIT OF CRAPPIE

**by Brent Frazee**  
**photographs by David Stonner**

Dwayne Walker watched his bright yellow bobber move slightly, then bounce back into position.

Not much of a hit. But it was enough to persuade Walker to set the hook. When he did, he immediately felt the heavy tug of a healthy Lake of the Ozarks crappie.

“You have to be quick,” Walker said with a laugh as he swung the 11-inch fish into the boat. “You can’t wait for them to pull that bobber under.

“When they’re not in a real aggressive mood, a lot of times they’ll just come up and touch it. You have to be ready.”

Walker is always ready.

He fishes for crappies on Lake of the Ozarks at least two times a week, year-round. Forget the bass, catfish, white bass, and walleyes that lure others.

“I’m just ate up by crappie fishing,” Walker said.

He has the electronics, the light-action rods and reels, and tackle trays full of plastic and hair jigs to prove it.

Some anglers opine that crappies are easy to catch. And sometimes, especially when the fish crowd into the shallows in spring to spawn, they are.

But on far more days, a cold front or unseen conditions will cause the popular panfish to seemingly vanish. Those are days Walker relishes.

“You have to fit the pieces of the puzzle together,” he said. “That’s what I like — the challenge.”

Walker met that challenge on a cool day last spring.





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The statewide limit of crappie is 30, but Lake of the Ozarks is a bit more restrictive with a daily limit of 15.





"There are times when Livescope shows that there are all kinds of crappies right under the boat, but they just won't bite. That's frustrating, but that's crappie fishing."

— DWAYNE WALKER



He followed a reliable pattern. He cruised down a row of docks in a cove on the Gravois arm of Lake of the Ozarks and used the side imaging on his electronics to search for schools of crappies.

When a clump of dots showed up on the screen, he knew he was in the right spot.

"I usually don't even make a cast until I spot fish in my electronics," he said.

He reached for a rod with a small hair jig tied to the light line and launched a long cast. "In this clear water, I usually try to stay back a ways from the fish," he said. "When they're up shallow, sometimes the boat will spook them if you get too close."

That strategy worked on this day. As Walker fished several schools of crappies at different locations, he steadily plunked fish into his livewell until he had his limit of 15 fish.

Those fish would be put to good use.

"My family loves to eat crappies," he said. "It's our favorite fish to eat."

## A Diversified Approach

Walker has plenty of ways to put food on the table. Though he stops short of calling himself an expert, he is on a constant quest to find ways to catch his favorite fish.

He started the way many anglers do at Lake of the Ozarks. He caught a limit of crappies on an April day, fishing from shore with a minnow under a bobber.

"I loved it right away," he said.

An all-state running back for the Mattoon (Ill.) High School football team as a youth, Walker, now 38, spent his childhood days involved in sports, which left little time for fishing. Now he is making up for lost time. When he isn't running his commercial cleaning and floor care business in Columbia, he often is on Lake of the Ozarks pursuing his passion.

Today, he employs many tactics to catch fish. Though his favorite method is casting small plastic lures to shoreline cover, he also catches crappies fishing vertically under the signal given off by his Livescope, which shows the real-time movement of fish. He'll also "shoot" docks, an underhanded method designed to get jigs under the docks where crappies hide.

He will troll crankbaits, such as small Bandits, and he will long-line jigs far from

the boat to appeal to roaming crappies. It's a game, figuring out what the crappies want. And Walker is an eager participant.

"It can change day to day," he said. "You can catch them in one place one day, then come back the next and they're gone."

"Sometimes, you have to switch to a different color or go to a jig with a different profile. You have to look at what they're eating at that time of the year."

## A Great Place to Fish

Walker laughs when he hears other anglers grumble about how Livescope is hurting the crappie population at Lake of the Ozarks.

The 54,000-acre reservoir in central Missouri has long been known for its abundant numbers of the popular panfish. And Walker has seen little to change his mind that Lake of the Ozarks has some of the best crappie fishing in the Midwest.

"It's not a trophy lake," he said. "But it has lots of 10- to 12-inch fish. And it's consistent. Every year, we just see a lot of healthy crappies caught."

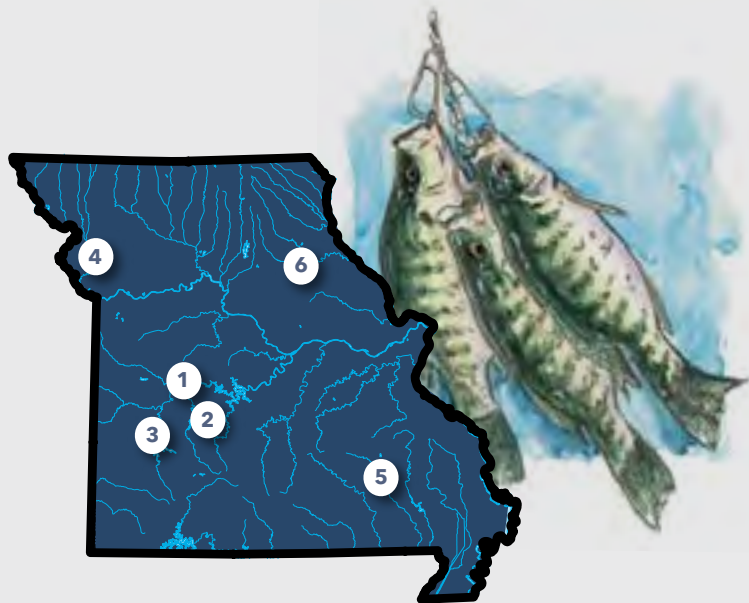
MDC Fisheries Biologist Samantha Clary agrees.

"Crappie fisheries are frequently referred to as 'boom or bust,' meaning that there is either a large spawn or very little at all," said Clary, who manages Lake of the Ozarks. "Things aren't that drastic here at Lake of the Ozarks."

"Our 'bust' years typically still produce a decent number of crappies."

Much of that can be tied to fairly consistent water levels during the spring when crappies spawn.





## OTHER PLACES TO FILL THE STRINGER

Lake of the Ozarks has a national reputation for its crappie fishing. But plenty of other bodies of water in Missouri offer outstanding fishing.

**1 | TRUMAN LAKE:** With thousands of acres of flooded timber and brush, Truman has the look of a classic crappie lake. It lives up to that billing, producing excellent fishing year after year. MDC surveys have found that the upper ends of the 55,600-acre reservoir have larger crappies, and the lower end have better numbers.

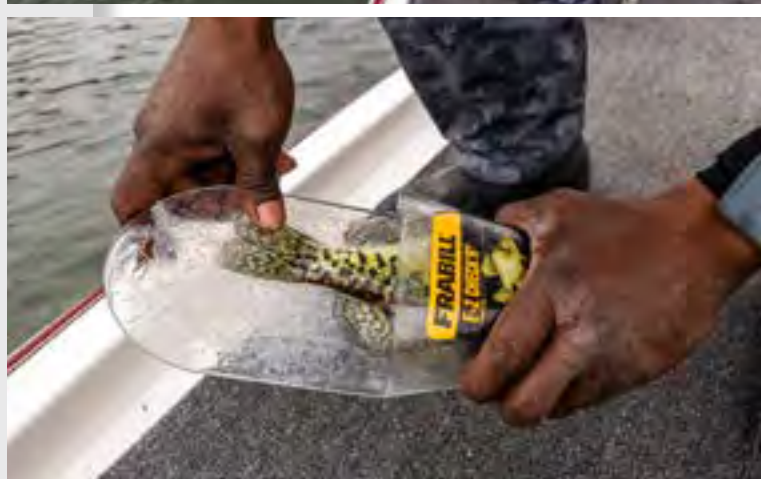
**2 | POMME DE TERRE LAKE:** Recent years of successful spawns have Pomme's crappie population in excellent shape. In 2024, about 70 percent of the crappie population was greater than the 9-inch minimum length limit in this 7,900-acre reservoir in southwest Missouri, according to MDC surveys.

**3 | STOCKTON LAKE:** This 24,000-acre reservoir is known for its consistent crappie fishing. Though numbers were down a bit going into 2024, MDC surveys showed that a solid year-class of white crappies produced in 2022 should grow to keeper size (10 inches) by this spring.

**4 | SMITHVILLE LAKE:** A recent change in creel limits (allowing anglers 30 crappies per day, with no more than 15 measuring more than 9 inches), is paying off at Smithville, a 7,190-acre reservoir near Kansas City. The move was designed to encourage anglers to thin the numbers of black crappies, and it is working. Populations of both white and black crappies are much improved, and the fishing has been outstanding.

**5 | CLEARWATER LAKE:** At 1,690 acres, Clearwater is one of Missouri's smallest federal reservoirs. But the scenic body of water in southeast Missouri is big in stature. It is known for its crappie fishing, especially in recent years. In a 2023 survey, almost 70 percent of white crappies collected were more than 9 inches long.

**6 | MARK TWAIN LAKE:** With an abundance of flooded timber, Mark Twain (18,600 acres in northeastern Missouri) is one of the most popular crappie lakes in the St. Louis area. It has a big population of crappies, which draws heavy fishing pressure.







Lake of the Ozarks isn't a federal flood-control reservoir; rather, it is owned by Ameren Missouri and is a popular tourist lake rimmed by homes and cottages.

Even in wet years, the big lake seldom reaches high levels because water is released as soon as it is safe for downstream entities.

"Research points to large variations in water level being correlated with large variations in recruitment (of newly produced fry) for a number of fish including crappie," Clary said. "Since Lake of the Ozarks doesn't have huge fluctuations in lake level, that may be one of the reasons we see more consistent recruitment."

An abundant baitfish population, many spawning coves with gravel or rocky banks, and good habitat in the

form of brush piles and the docks themselves also are keys.

### Something for Everyone

Lake of the Ozarks is known for its ability to satisfy crappie anglers of all skill levels.

Many dock owners are content to fish the same way they always have. They sink brush around their docks, then use minnows to catch the fish that the cover attracts.

Then there are anglers like Walker who use high-dollar electronics to locate the often-hiding fish.

He is surrounded by four screens when he eases into his bass boat for a day of fishing. One shows a map of what the lake looks like beneath the surface — everything from the channels to the drop-offs, to the brush piles that have been sunk. Another shows real-time movement of the

fish. Then there is a unit that is dedicated to showing what lies off to either side of the boat. And still another provides the depth of the water and the fish using it.

Despite all that technology, though, there are no guarantees.

"There are times when Livescope shows that there are all kinds of crappies right under the boat, but they just won't bite," he said. "That's frustrating, but that's crappie fishing." ▲

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*Brent Frazee is an award-winning writer and photographer who was the outdoors editor of The Kansas City Star for 36 years before retiring in 2016. He continues to freelance for magazines, newspapers, and websites. He lives in Parkville with his wife, Jana, and two yellow labs, Millie and Maggie.*



# GARDEN *of*

Persimmon fruit in winter.

PHOTOGRAPH BY  
JIM RATHERT





# EATIN’

## ENJOYING MISSOURI’S NATIVE FRUIT TREES IN HOME LANDSCAPING

by Lisa Brunette

Gardening with native plants has become very popular, especially in Missouri, which boasts the largest Wild Ones chapter in the nation. Wild Ones is a group dedicated to promoting interest in gardening with native plants. It’s easy to see why native gardening is popular, when these plants are so well adapted to our region that they can often take hold and thrive with relatively little effort on the part of the homeowner. Natives also support pollinators, other insects, and wildlife, providing shelter and hosting and feeding them from youth to maturity.

But what often takes a back seat in native-plant discussions is their use as a source of food for the homeowner.

And that’s a shame, as our native flora supported native people long before settlers of the westward expansion brought European varieties to this land. It’s worth getting to know and use them in the edible home landscape.

In her book *On the Way Home*, celebrated Missouri author Laura Ingalls Wilder, upon arriving in the Ozarks after a long trek from South Dakota, observed:

“The fences are snake fences of split logs and all along them, in the corners, fruit grows wild. There are masses of blackberries, and seedling peaches and plums and cherries, and luscious-looking fruits ripening in little trees that I don’t know, a lavishness of fruit growing wild. It seems to be free for the taking.”

Wilder’s daughter, Rose Wilder Lane, clarifies in a footnote to that book that the “luscious-looking fruit” her mother mentions were Missouri’s native pawpaws and persimmons. After enduring a devastating drought in South Dakota, the Ozarks must have seemed like a Garden of Eden to Wilder, or at least a garden of eatin’.



*Persimmon bark resembles alligator hide.*



*Persimmon fruit is delicious right off the tree, but wait until they're ripe, or the astringency will make your mouth pucker.*

So, what's the best way to take advantage of this natural bounty? Because our native fruit trees offer so much for wildlife, the insect world, and human beings, it's a good idea to start with them. Here are three to consider planting in your own backyard.

## *Persimmon*

Who wouldn't love a persimmon (*Diospyros virginiana*) tree, with its distinct bark — resembling alligator hide — and its offering of plentiful, ripe fruit each fall? You don't have to be a box turtle to appreciate the pulpy orange flesh, though they love them, too. You can press ripe persimmons through a sieve to extract a pudding that works

well in cookies, ice cream, bread, and more, similar to pumpkin meat but with a hint of maple sweetness. For a healthy take, mix persimmon pudding with yogurt or add to squash soup. They're also delicious right off the tree, but wait until they're ripe, or the astringency will make your mouth pucker. Much of that is in the peel, too, but when you run the fruit through a sieve, the peel gets removed. If you pick them too soon, simply leave them to ripen in a paper bag, as the natural ethylene gasses will work their magic.

Folklore holds that if you split a persimmon seed, it will foretell the state of our upcoming winter. If the kernel inside the seed resembles a spoon, we'll see heavy snow to shovel; if it's a knife, we should expect cutting winter winds;

and a fork suggests powdery snow over a mild winter.

Persimmons make for an attractive landscape tree, growing to 60–65 feet. Can you still harvest the fruit at this height? Conveniently, persimmons drop just as they ripen, and while they might look puckered and even smashed, if you get them at this stage, they're perfect.

There's also some thought that one could try to trim the trees to harvest height, as is often done in home orchards







*Snow-white blossoms from wild plum trees are plentiful in early spring.*

to other fruit bearers, but this approach is not recommended.

"A tree wants to be a tree," said MDC Forest Nursery Supervisor Mike Fiaoni. "I believe even though you trim it to try and keep it small, it is still going to try and be the tree."

So, you might just let the persimmon grow to its natural height in your landscape. If gathering fruit from the ground, take care to make sure they're easily cleaned of debris and not already claimed by insects. And of course, it's better to avoid pesticides in the home garden anyway but especially where you'll be gathering fruit to consume.

Male and female flowers grow on separate trees, so plant at least two trees or order a grafted nativar (cultivated native) that will bear fruit.

## Wild Plum

Speaking of trees being trees, you might think of our wild plum (*Prunus americana*) in terms of thickets, but it's pretty easy to encourage them to take on the form of a classic orchard tree: Just cut the suckers.

For the low, low price of \$3, my husband and I now enjoy three mature plum trees in our backyard, and they've grown without all the care and effort you'd ordinarily associate with an orchard tree. Through Wild Ones, we purchased three seedlings as part of a group order to the George O. White State Forest Nursery in 2020, and they bore fruit in 2023. The snow-white blossoms are plentiful in early spring, drawing birds and insect pollinators and filling the air with a heady

scent. The largest is already about 15 feet, though Fiaoni says they can top out at 20. He recommends mowing or cutting the suckers to prevent thickets and can show you a whole orchard full of gracefully shaped wild plum to prove this works.

The fruit is deliciously tart right off the tree. I've also made it into sugar-free jams, sauces, and chutneys. The plums are small enough that you can use a cherry pitter to remove the stone and thereby retain the skin for its nutrients. I use honey to sweeten and apple cider vinegar and onions, garlic, and spices if going for a chutney. I don't add pectin, as the plum's own natural pectin thickens it enough, skin-on. It would undoubtedly do well in a plum wine or cider.

It's a good idea to plant at least two for cross-pollination.





*The pawpaw is the official  
state fruit of Missouri.*

## Pawpaw

Thanks to the lobbying efforts of a group of fourth-grade civics students from St. Louis' New City School, the pawpaw (*Asimina triloba*) became Missouri's official state fruit tree in 2019.

It's a worthy distinction for what is essentially a tropical fruit, growing right here in Missouri without any close relatives to accompany it on the evolutionary trail. That's a bit of an oddity all its own, and the fact that it's pollinated mainly by flies ups the strange factor. Some gardeners hang raw meat in its branches to attract its usually unwanted pollinator. The leathery, dark purple flowers

seem like something out of a sci-fi flick.

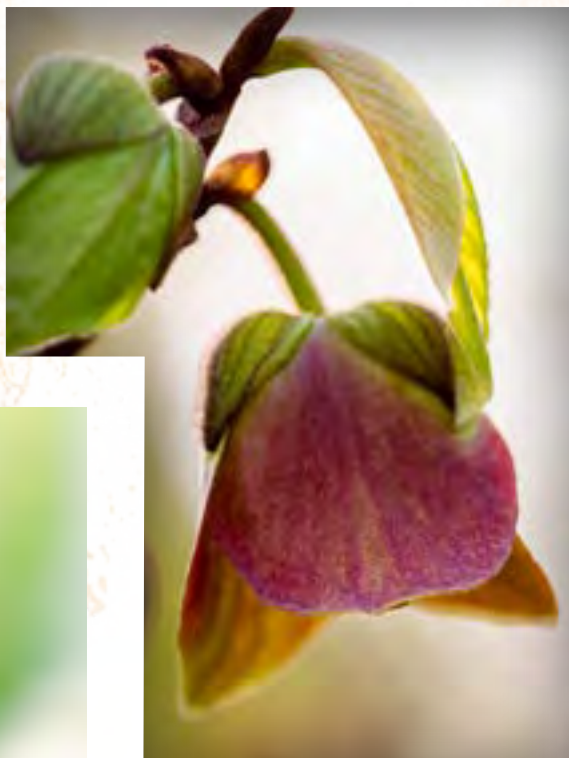
In the home landscape, the pawpaw is a lovely, unusual tree, growing to a height of 15 to 30 feet, with slender branches and large, oblong leaves. It thrives in the shade, owing to its status as an understory tree in the wild, though you might get more plentiful fruit with a bit of sun. But rather than shade, your biggest obstacle to reaping this tasty "custard apple," so aptly named for its creamy texture, are the raccoons, opossums, and squirrels who also have a hankering for the fruit. The trees will sucker, so if you've got a nice, shady

area, give it over to a pawpaw grove, so there's more than enough for all. We find the combination of pawpaw and native sensitive fern (*Onoclea sensibilis*) to be just right for a spot where a neighboring apartment building casts shade most of the day.

Plant several seedlings of different varieties for best cross-pollination.

The culinary uses for pawpaw are vast, as they remain so little explored. They work as a substitute for just about any tropical fruit in smoothies, ice cream, and the like. They're unforgettable when ripe and ready, and even can be used in salsa.





Other native trees with edible fruit include chokecherries (*Prunus virginiana*), serviceberries (*Amelanchier arborea*), and eastern red cedar (*Juniperus virginiana*). Serviceberries taste like an almond-infused blueberry right off the tree, and juniper berries add a pinelike flavor to teas, fermented vegetables, and smoked meat. Chokecherries got that name for a reason and do better as a honey-sweetened jam.

As for general gardening advice when working with native edible trees, Missouri State Botanist Malissa Briggler says, “Just pay attention to the light, moisture, and soil requirements as you plan the garden, just like you would when planting any native.”

All the tree fruits mentioned are commonly consumed, but if they are new to you, there are steps you can take to be safe:

- Make sure you obtain the seeds, seedlings, or trees from a reputable source and have them clearly identified before planting.
- Take extra care with cultivated versions of our natives, as they might not feed pollinators the same way and might not possess the same qualities for human use.
- Try a small amount at first to see how your system reacts, as some people report sensitivities.

Gardening with our native fruit trees can be a fun, rewarding, and tasty experience — for both you and the wildlife and pollinators you wish to support. ▲

*Lisa Brunette has been writing professionally for more than 30 years. She and her husband, Anthony, share backyard homesteading stories at [brunettegardens.com](http://brunettegardens.com). They received a platinum award for their native-plant garden from the St. Louis Audubon Society in 2022.*

## EDIBLE BERRIES FROM NATIVE TREES

**CHOKECHERRIES**, as their name implies, would be better as a honey-sweetened jam.



**SERVICEBERRIES** give an almond-infused blueberry flavor right off the tree.



**JUNIPER BERRIES** add a pinelike flavor to teas, fermented vegetables, and smoked meat.







# Marvelous MOSSSES

OFTEN OVERLOOKED,  
THESE TINY PLANTS INCITE  
ECOLOGICAL WONDER

by Dianne Van Dien  
photographs by Noppadol Paothong

**m**osses. We've all seen them — those low-growing, often cushiony-looking plants that may carpet a forest floor, grow on the bark of trees, or cover a rock wall. It's easy to traipse past them on a trail and see only a blur of green. But stop for a moment to truly look at them, and you might be surprised.

"When Linda gave me the hand lens and I saw the mosses through that, I couldn't believe it! It was like a whole new world opened up," my friend told me, her voice brimming with enthusiasm. Up close, she said, mosses are full of intricate details.

A few months later, we set out to look at mosses at Wild Haven Nature Area in Columbia. The roughly 100-acre area is owned and cared for by the Columbia Audubon Society. Louise Flenner, a member of the Audubon chapter, has written a guide that directs people to 10 moss species along a portion of the area's trails. We found the guide online. Armed with a printout, we stepped onto the path.

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Fern moss

## A BRIEF FORAY INTO MOSS BIOLOGY

Mosses don't function like the plants we normally think of (for example, a daisy or a maple tree). Knowing this can help you better understand what you're looking at when you examine them. Mosses have no veins or true roots, and they reproduce with spores instead of seeds. They hold onto soil, rocks, or logs with tiny rootlike structures called rhizoids. Lacking an advanced vascular system for transporting water and nutrients, mosses absorb moisture and nourishment from the air and rainfall. Their leaves are usually only one cell thick, which makes it easier for water to disperse throughout the plant. Because they are small and can't pull water from deep in the ground, many species are prone to drying out and thrive in wet and humid places.

The spores of mosses form inside a small capsule that often is on the end of a thin stalk that grows out of the main green part of the plant. These spore-bearing structures may not be present year-round, but they can be helpful for telling mosses apart as well as for telling mosses from liverworts and hornworts — two other plant types that are also small, nonvascular, and reproduce with spores. (See sidebars for information on plants that can be confused with mosses and for more on moss spores and reproduction.)



Mosses have a two-part life cycle. The green, leafy part of the moss is the **gametophyte**, which produces gametes (eggs and sperm). The gametes unite to form the other part of the life cycle: a **sporophyte**, which grows out of the female gametophyte. It is the slender stalk tipped with a capsule full of **spores**. The spores disperse and produce new gametophytes.



Apple moss

## MOSS TYPES

About 12,000 moss species are found across the world. More than 300 species live in Missouri. Biologists group them into four main categories based on how they grow. In Missouri, most mosses fall into two groups: cushion mosses, which grow in rounded mounds or clumps, and carpet mosses, which spread and branch out, forming mats across a rock or other surface they're growing on. Sphagnum mosses (or peat moss) is a third type. They have a shaggy appearance, often grow densely in bogs, and are more common in northern climates. Missouri has 18 species of peat moss. Dendritic (or tree) mosses are the fourth type. They look like a mat of tiny trees. Our state only has two species of these.

On the self-guided moss trail, we encountered only carpet and cushion mosses. The first belonged to the carpet group. Named delicate fern moss, its leaves look like miniature ferns, dozens of tiny, connected ferns that grow horizontally, branching and spreading across the ground like a carpet.

It was here we discovered that we'd forgotten to bring a hand lens, which is the equivalent of forgetting your binoculars when you go birdwatching. But, as with birdwatching, you can still enjoy seeing the birds (mosses); you just can't see all the defining details.

The moss trail guide, however, provides the species names and photos, so we just



“We have a closer association with things  
if we can put a name to them.”

— LORIE HETRICK-VOLENBERG



Common haircap moss (in a dried state)



Viewing mosses through a hand lens will magnify the finer details and help you see more differences between species. You may find there's a learning curve for using the hand lens. A camera that takes good closeups works as an alternative option.

needed to follow the trail directions and match the photos and descriptions in the guide to the mosses featured at each location. A hand lens would have shown us more, but we were still able to see how each species was unique. We even found two that were not in the guide, which made 12 species, all in just under a mile.

### WHAT'S IN A NAME?

At first, taking time to identify mosses felt a bit eccentric, like something only hardcore botanists would do. But Julie Schroeder, an amateur naturalist from central Missouri, has a different perspective.

“Imagine if you couldn't tell the difference between a cardinal and a bluebird — if you just saw them as ‘birds,’” Schroeder says. “Or if you couldn't tell the difference between a daisy and a poppy — it's just a ‘flower.’ That's how most people are with mosses, lichens, and liverworts.”

Lorie Hetrick-Volenberg, author of the forthcoming book *Mosses of Missouri Through a Hand Lens*, takes the view that “we have a closer association with things if we can put a name to them.”





Common haircap moss



Urn/Goblet moss



Tree moss



Tooth moss



Broom moss



Beard moss



Sphagnum (peat) moss



Tree apron moss

Her interest in identifying mosses happened “by accident.” She was researching lichens and learning to look at them under a microscope. Remembering from botany class that most mosses are just one cell thick, she grabbed some from her yard as practice material for using the scope. That’s when, she says, she began to realize how varied mosses are and that it’s “not necessarily easy to figure out what [species] they are. And I was just hooked by the challenge of it. But then I was also hooked by being so amazed again of the diversity of what is out there. And I just wanted to learn more and more about them.”

Speaking for myself, I can feel accomplished just figuring out what family or genus a moss belongs to. Is it a fern moss, thyme moss, goblet moss, broom moss, beard moss, tree moss, or something else? But mosses do have some rather spectacular species names. Consider yellow yarn moss, tangled thread moss, bonfire moss, baby tooth moss, slender starburst moss, oil spill moss, and my favorite, tiny tornado moss.

Yet, intriguing names are only one facet of what’s fascinating about mosses.

## ECOLOGICALLY MIGHTY

Retired biologist and former MDC Naturalist Bonnie Anderson says what impresses her most about mosses is their “ancient history” and “their importance to the existence of everything,” referring to how mosses were one of the first plants to develop. Evolving about 450 million years ago, before flowering plants, they helped fill the atmosphere with oxygen, setting the stage for other organisms. Mosses also were one of the first plants to colonize land, growing on rock surfaces, breaking down the rock, and beginning the process of soil formation.

Since those early times, mosses have continued to make contributions.

“The research that is starting to come out as far as our understanding about the roles that they play is stellar,” says Hettrick-Volenberg.

Mosses, she points out, not only produce soil, but they also protect and regenerate soil. If soil is exposed, “it’s not uncommon to see mosses within a





Mosses grow on a damp rock face at Graham Cave State Park.

year or two come in to start to cover that land, and as the soil heals and regenerates, other plants come in.”

Some seeds even sprout inside of mosses and then send roots into the soil. Because mosses absorb nutrients from the air, when they die and decompose, they pass those nutrients into the soil for other plants to use. Studies have also found that soils with mosses have fewer plant pathogens than soils without moss. So, mosses are good for neighboring plants.

And, Hetrick-Volenberg says, “they play a huge role in sequestering carbon and nitrogen, and that’s a big one as we all know with climate change going on.”

Many moss species pull pollutants from the air, acting as purifiers, but they also “are like the canary in the coal mine,” Anderson says. “They are indicator species that let us know if things are going well or if they’re not going well.”

By testing mosses growing on trees in Portland, Oregon, researchers found areas with high levels of cadmium in

## PLANTS THAT MAY BE **CONFUSED** WITH MOSSES

Other small plants that may be confused with mosses include **liverworts**, **hornworts**, and **lichens**. Like mosses, liverworts and hornworts lack a vascular system and reproduce with spores. They also generally grow in moist or wet habitats. Lichens are not actually plants, but are composite organisms formed when certain fungus species join with certain algae species. Lichens live in a variety of places, including dry, sunny locations.

Missouri has four species of hornworts, about 112 species of liverworts, and about 436 species of lichens. More detailed information about these groups can be found on our online *Field Guide* at [short.mdc.mo.gov/4KM](http://short.mdc.mo.gov/4KM).

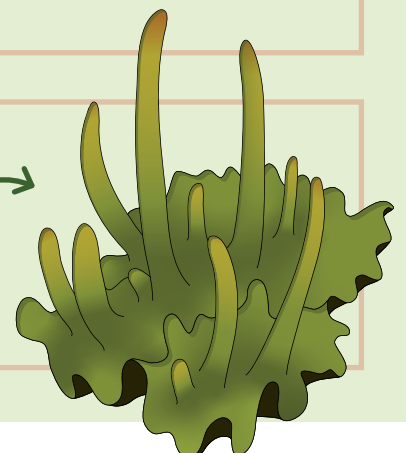


### LICHENS

The **common greenshield lichen** grows on tree bark. With its frilly appearance, it is categorized as a foliose (or leafy) lichen. Missouri has a wide variety of lichens, and this is but one example.

### HORNWORTS

Hornworts have a leafy appearance similar to that of many liverworts, but their spore-bearing structures are elongated and horn-shaped.





the air, a heavy metal with links to cancer and kidney disease. This and other studies show that some moss species could be used as a tool for gauging air pollution.

At the local level, patches of moss provide microhabitats for tiny animals such as snails, sowbugs, centipedes, and other invertebrates, which in turn make these patches excellent hunting grounds for shrews, frogs, and other insect eaters. Mosses also are a popular material for nests. Birds, mammals, and even bumblebees gather them. The moss may be woven into the nest or used as cushioning and helps insulate against the cold.

Mosses themselves handle the cold well. Many have antifreeze properties and stay green all winter.

"Mosses are extremely resilient to environmental conditions," says Missouri State Botanist Malissa Briggler. "They can go through dry periods where the plants completely dry up and are instantly restored once moisture returns."

You can watch this transformation happen. On our moss walk, we poured water on part of a tree apron moss,

and within seconds, the moss began changing from brownish to bright green and the leaves unfurled as they took in the moisture.

Although mosses can be found throughout Missouri, "MDC currently tracks populations of 121 moss species that are considered rare and of conservation concern," Briggler says. "Some species are specific to unique microhabitats that stay cool and moist even during the heat of summer."

Whether rare or common, all our mosses are part of our state's remarkable natural heritage.

"They are resilient," says Hetrick-Volenberg. "They're hardy. They're quite amazing at what they can do and the fact that they've been here for so long ... They're just really cool for being such a little tiny thing." ▲

*Dianne Van Dien is an editor for MDC and writes Nature Lab for the Missouri Conservationist. She enjoys learning about the small things in nature that often go unnoticed.*

## RESOURCES FOR LEARNING ABOUT MOSSES

It's easy to get started learning about mosses as resources abound on the Internet. Here are a few to get you started.

### WEB:

MDC's online Field Guide:  
[short.mdc.mo.gov/4VV](http://short.mdc.mo.gov/4VV)

Self-Guided Moss Trail:  
[short.mdc.mo.gov/4KY](http://short.mdc.mo.gov/4KY)

Ohio Moss and Lichen Association:  
[ohiomosslichen.org](http://ohiomosslichen.org)

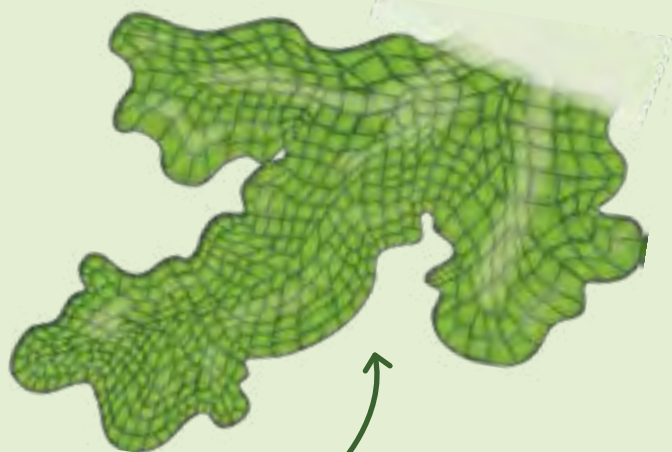
Provides general information about moss biology and photos of many species we also have in Missouri.



### BOOKS:

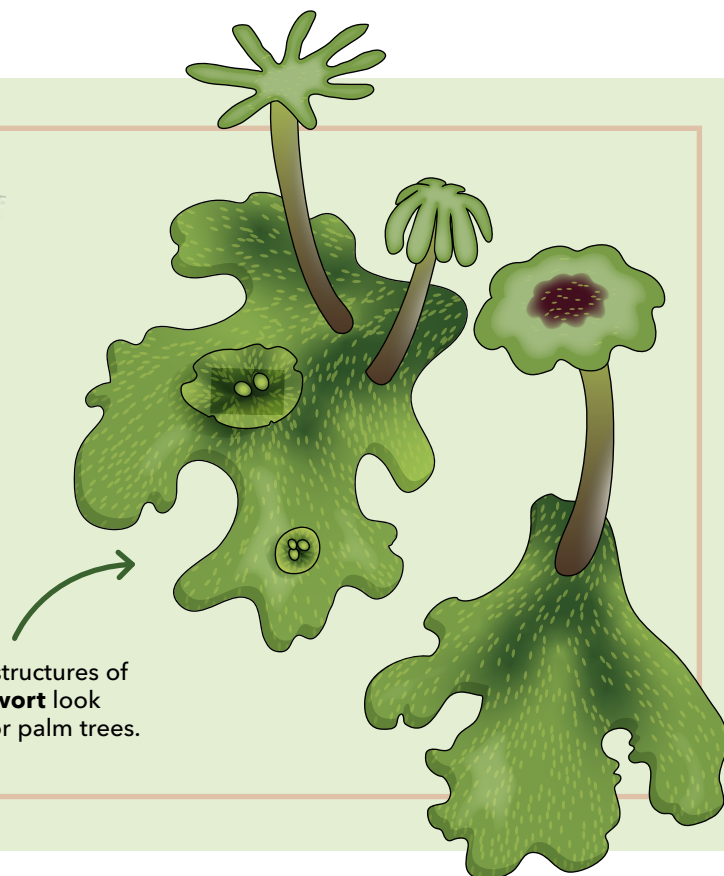
*Mosses of Missouri Through a Hand Lens*  
by Lorie Hetrick-Volenberg (forthcoming)

*Gathering Moss*  
by Robin Wall Kimmerer



### LIVERWORTS

Many species of liverwort have a leafy, ribbonlike appearance like this **snakeskin liverwort**.



The spore-bearing structures of the **umbrella liverwort** look like tiny umbrellas or palm trees.



# Get Outside

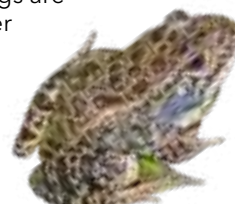
in APRIL → Ways to connect with nature

Wild columbine

Ruby-throated hummingbird

## Swine Serenade?

**Northern crawfish frogs** breed at night through April. This activity is triggered by warm, heavy rains. These frogs are rarely seen, but in the proper prairie habitats at the right time, you can hear the males calling — a deep, loud, snoring gwwaaa. A group of calling males sounds like pigs at feeding time.



Northern crawfish frog

## Birds and Blooms

**Wild columbine** starts blooming in April, which is just in time to provide nectar for hungry, newly returning **hummingbirds**.

## Morel Madness

Morels are choice edible mushrooms that are difficult to see but not hard to learn how to identify. There are several varieties to look for:

- **Yellow morels** (common morels) appear in April and early May. They can sometimes get huge, up to a foot high and 6 inches thick.
- **Black morels** appear in April and early May. They usually only reach a few inches high. Some observers have noted they often come out a little earlier than the yellow morels.
- **Half-free morels** appear in April. They occur scattered in mixed woods, and they usually pop up before the other morels.

For more information, visit [short.mdc.mo.gov/4Vc](http://short.mdc.mo.gov/4Vc).



HONEY LOCUST MOTH: DONNA BRUNET



Cliff swallow mud nests

## Cliff Colonizers

Cliff swallows arrive in April, often returning to the colony in which they were born. Their clusters of **juglike mud nests** are attached to overpasses, bridges, culverts, barns, and cliffs. In spring, people sometimes see these birds gathered around rural mud puddles, where they roll little bits of mud into a ball and fly off, carrying it in their mouth to the nearby nest they are constructing.

## Blossoms and Butterflies

Henry's elfin and **spring azure** butterflies, as well as the colorful, butterflylike grapevine epimenis moth, are especially fond of the blossoms that adorn **wild plums**. Their emergence as adults is perfectly timed to coincide with the springtime blooming period of this ornamental tree.



Spring azure

Wild plum blossoms

### Natural Events to See This Month

Here's what's going on in the natural world.



Killdeer lay eggs in simple ground nests.



Bats form summer nursery colonies.



Western mud-snakes mate.



VIRTUAL

## POND TO PLATE: Fish Cooking 101

Thursday • April 17 • 7-8:30 p.m.

Online only

Registration required by April 16. To register, call 888-283-0364 or visit [short.mdc.mo.gov/4VG](https://short.mdc.mo.gov/4VG).

All ages

Now that spring fishing season is in full swing and you have caught and cleaned a mess of fish, it is the time to learn how to cook them. In this virtual fish cooking program, we will focus on the common equipment needed for cooking, frying, and grilling fish, as well as other methods to prepare fish.

## WILD EDIBLES: Learning to Mushroom Hunt

Thursday • April 24 • 6-7:30 p.m.

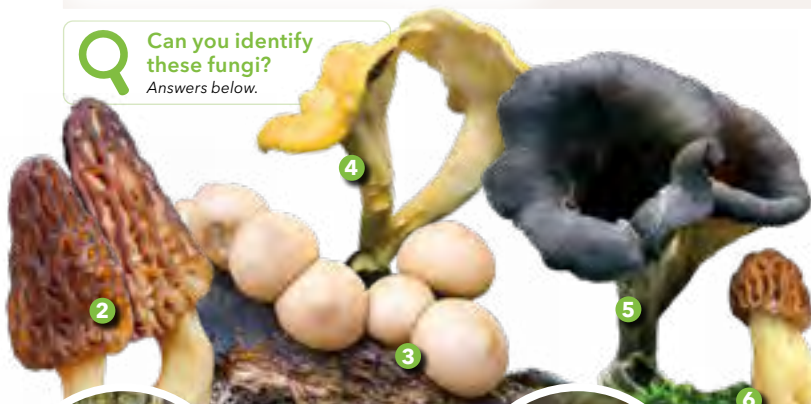
Registration required by April 23. To register, call 888-283-0364 or visit [short.mdc.mo.gov/4Vx](https://short.mdc.mo.gov/4Vx).

All ages

Join us in learning about mushrooms and how they live and grow. Get some tips on how to find and identify the edible ones and what ones to stay away from. The link to join this class will be sent the morning of the class.

To be safe, always be certain of your mushroom identification before consuming. For more information, consult *A Guide to Missouri's Edible and Poisonous Mushrooms* at [short.mdc.mo.gov/ZNf](https://short.mdc.mo.gov/ZNf).

Q Can you identify these fungi?  
Answers below.



Honey locust moths fly through September.



Crappie spawn.

1: YELLOW (COMMON) MOREL. 2: BLACK MOREL. 3: PEAR SHAPED PUFFBALLS. 4: SMOOTH CHANTERELLE. 5: BLACK TRUMPET. 6: HALF-FREE MOREL.

# DISCOVER FISHING

Want to make connections?  
Why not **discover fishing**?  
It's a great way for everyone to have fun outdoors and learn about conservation.

With fishing you can:

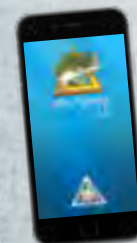
Find adventure and excitement

Spend quality time with family

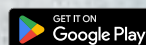
Escape the stress of everyday life

Reconnect with friends

Make lifetime memories



Download the **MO Fishing** app today to make it even easier!





# Places to Go

## OZARK REGION

### John Alva Fuson, MD Conservation Area

Just what the doctor ordered  
by Larry Archer

✧ As the health benefits of time spent in nature become better known, a day, night, or weekend spent hiking, camping, horseback riding, birding, or other outdoor endeavor at John Alva Fuson, MD Conservation Area (CA) may be just what the doctor ordered.

Located on 1,534 acres in southwest Missouri, the area was purchased in part with funds donated from the estate of Maurine Fuson Raidler to honor her father's years of medical practice throughout Wright County.

Like many conservation areas, Fuson CA sees its share of turkey hunters in April, but that's not the only common public use on the area, said Bryant Creek District Supervisor Randall Roy.

"I would say use in April would be primarily turkey hunting," Roy said. "Horseback riding on interior service roads is permitted by special use permit as well."

The area also includes almost 6 miles of mowed service roads, which can open much of its primarily forested landscape to hikers. On the eastern side of the area, Parks Creek, which runs from the northern boundary of the area to the southern boundary, contributes an estimated 10,000 feet of stream frontage, making it an ideal spot for wildlife viewing.



A spring-fed pond on Fuson CA is one of several ponds on the area that serve as watering holes for wildlife.

#### WHAT TO LOOK FOR WHEN YOU VISIT



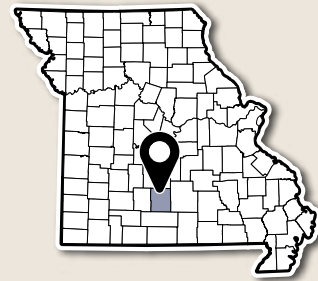
Blue-gray gnatcatcher



Speckled kingsnake

DAVID STONNER





## JOHN ALVA FUSON, MD CONSERVATION AREA

consists of 1,534 acres in Wright County. From Grovespring, take Highway 5 north 3.75 miles, then Smittle Cave Road west 1.75 miles to Parks Creek Road, which runs through the area.

39.123456, -92.123456

[short.mdc.mo.gov/4VF](http://short.mdc.mo.gov/4VF) 417-746-0291

### WHAT TO DO WHEN YOU VISIT



**Bicycling** Almost 10 miles of improved, unimproved, and service roads open to bike use year-round.



**Birdwatching** The eBird list of birds recorded at John Alva Fuson, MD CA is available at [short.mdc.mo.gov/4Vy](http://short.mdc.mo.gov/4Vy).



**Camping** Designated camping sites; individual campsites.



**Hiking** Mowed service roads totaling 5.8 miles.



**Horseback Riding** Allowed on interior service roads with special use permit.



**Hunting Deer and turkey** Regulations are subject to annual changes. Refer to MDC's regulation page online at [short.mdc.mo.gov/Zjw](http://short.mdc.mo.gov/Zjw).

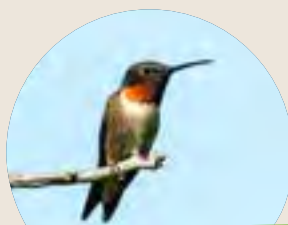
Also **bear, dove, quail, rabbit, and squirrel.**

"The area does see a fair amount of small game hunting and has a good population of rabbits and some quail hunting opportunities in the upland portion of the area."

—Bryant Creek District Supervisor  
Randall Roy



Western slimy salamander



Ruby-throated hummingbird



Spring peeper



Quail





## Falcate Orangetip

*Anthocharis midea*

Status	Size	Distribution
Resident species	Wingspan: 1-1½ inches	Nearly statewide

**F**alcate orangetip males are unmistakable with their small size, white coloration, and orange wingtips. The size of the orange wing patch can vary greatly. Both sexes have hooked — falcate — forewings with black spots along the wing margins and in the center of the forewings. A maze of narrow green marbling covers the ventral hindwing and forewing tip. The flight, while not rapid, can be quite erratic.

Larvae are bluish-green with an orange stripe down the middle of the back and a white stripe running along each side.



### LIFE CYCLE

Females lay eggs singly onto a suitable food plant. A single caterpillar will eat all the flowering parts on a plant, even cannibalizing smaller caterpillars competing for the same food source. Females normally do not deposit more than one egg on a flower cluster. This species overwinters as a chrysalis and emerges in spring as an adult butterfly.



### FOODS

Caterpillars feed at night, eating flowers, developing fruits, and young leaves of native plants in the mustard family, including rock cresses, bitter cresses, shepherd's purse, and toothwort. Adult falcate orangetips visit spring wildflowers — usually small, low-growing varieties such as toothwort and other mustards, violets, and spring beauty.



### HUMAN CONNECTIONS

After a long winter, people love to see the first signs of spring. One of these signs is the April appearance of male falcate orangetips as they patrol Ozark hilltops amid spring wildflowers and greening grasses.



# Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

## Free MO Fishing and MO Hunting Apps

MO Fishing lets you view permits, find great places to fish, and ID your catch. MO Hunting makes it easy to view permits, electronically notch them, and Telecheck your harvest. Get both in Android or iPhone platforms at [short.mdc.mo.gov/Zi2](http://short.mdc.mo.gov/Zi2).



## FISHING

### Black Bass

Impounded waters and non-Ozark streams:  
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Release:  
March 1–May 23, 2025
- ▶ Catch-and-Keep:  
May 24, 2025–Feb. 28, 2026

### Bullfrog, Green Frog

June 30 at sunset–Oct. 31, 2025

### Nongame Fish Giggling

Impounded waters, sunrise to sunset:  
Feb. 16–Sept. 14, 2025

### Paddlefish

Statewide:  
March 15–April 30, 2025

On the Mississippi River:  
March 15–May 15, 2025  
Sept. 15–Dec. 15, 2025

### Trout Parks

State trout parks are open seven days a week  
March 1 through Oct. 31.

Catch-and-Keep:  
March 1–Oct. 31, 2025

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at [short.mdc.mo.gov/Zib](http://short.mdc.mo.gov/Zib). Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at [short.mdc.mo.gov/ZZf](http://short.mdc.mo.gov/ZZf).

## HUNTING

### Bullfrog, Green Frog

June 30 at sunset–Oct. 31, 2025

### Coyote

*Restrictions apply during April, spring turkey season, and firearms deer season.*

Open all year

### Deer

Archery:  
Sept. 15–Nov. 14, 2025  
Nov. 26, 2025–Jan. 15, 2026

Firearms:

- ▶ Early Antlerless Portion (open areas only):  
Oct. 10–12, 2025
- ▶ Early Youth Portion (ages 6–15):  
Nov. 1–2, 2025
- ▶ November Portion:  
Nov. 15–25, 2025
- ▶ CWD Portion (open areas only):  
Nov. 26–30, 2025
- ▶ Late Youth Portion (ages 6–15):  
Nov. 28–30, 2025
- ▶ Late Antlerless Portion (open areas only):  
Dec. 6–14, 2025
- ▶ Alternative Methods Portion:  
Dec. 27, 2025–Jan. 6, 2026

### Groundhog (Woodchuck)

May 12–Dec. 15, 2025

### Pheasant

Youth (ages 6–15):  
Oct. 25–26, 2025  
Regular:  
Nov. 1, 2025–Jan. 15, 2026

### Quail

Youth (ages 6–15):  
Oct. 25–26, 2025

Regular:  
Nov. 1, 2025–Jan. 15, 2026

### Rabbits

Oct. 1, 2025–Feb. 15, 2026

### Squirrels

May 24, 2025–Feb. 15, 2026

### Turkey

Spring:

- ▶ Youth (ages 6–15):  
April 12–13, 2025
- ▶ Spring:  
April 21–May 11, 2025

Fall:

- ▶ Archery:  
Sept. 15–Nov. 14, 2025  
Nov. 26, 2025–Jan. 15, 2026
- ▶ Firearms:  
Oct. 1–31, 2025

### Waterfowl

See the Migratory Bird and Waterfowl Hunting Digest or visit [short.mdc.mo.gov/ZZx](http://short.mdc.mo.gov/ZZx) for more information.

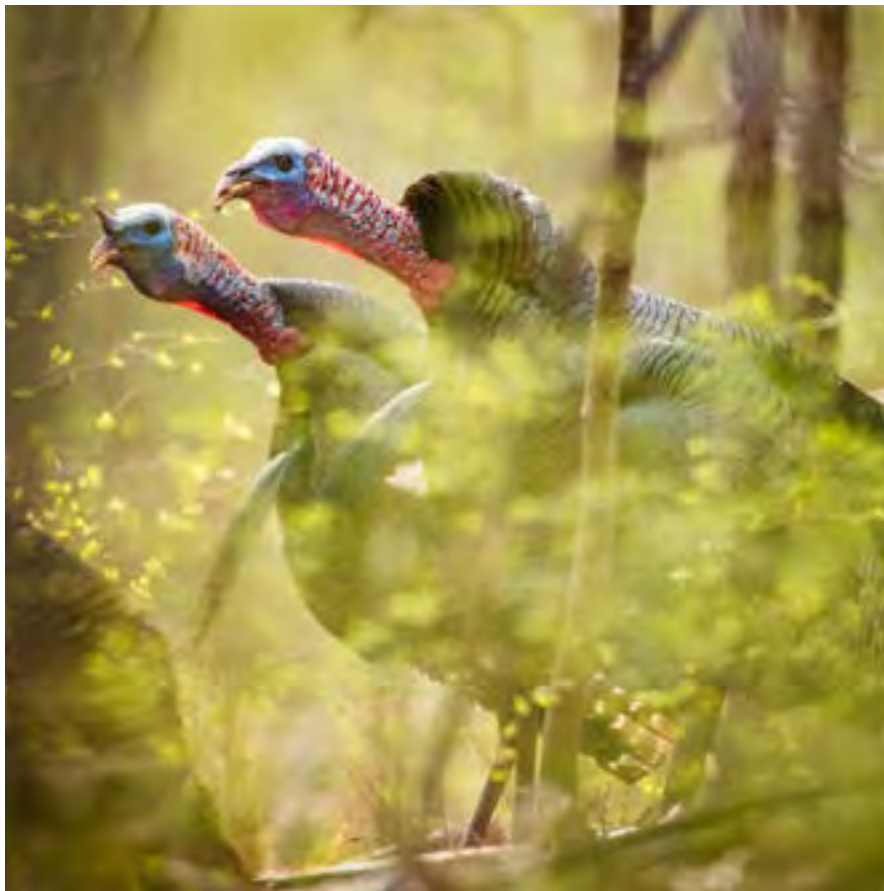
## TRAPPING

**Special Trapping Season for Private Lands Only:**  
**Coyote, Opossum, Raccoon, Striped Skunk**  
March 1–April 14, 2025





*Serving nature and you<sup>®</sup>*



**Follow us  
on Instagram**

@moconservation

Spring is a great time to get outside and explore. It's even better when you have a buddy along for the adventure. So, grab a friend or a family member and get out there. Nature awaits. What will you discover?

📷 by **Noppadol Paothong**

**Free to Missouri households**

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